IN THE SPECIFICATION

1.   Please amend the paragraph beginning on page 1, line 15 as follows:

Recent proposed changes in federal regulations within the United States mandate that a discretionary control feature, commonly called the "V-chip" function, be incorporated into the design and construction of consumer television receiver circuits. This V-chip function allows a parent or other responsible person discretionary control to block-out television programs that the parent deems to be inappropriate for young viewers. The V-chip function may be implemented by ~~incorporatation~~ incorporation into one or more dedicated ICs or by inclusion in a microprocessor. The proposed discretionary control feature will be encoded and transmitted to television receivers on the twenty-first (*i.e.*, line 21) line of the 525 horizontal scanned lines that make up one frame of each picture screen. Each transmission of line 21 contains a synchronizing clock burst that is followed by data. The data contained within line 21 also contains closed captioning information to display words (*i.e.*, descriptive text) on the television screen for hearing impaired viewers. Line 21 data further includes discretionary control data with a value representing the level of sex and violence in the corresponding video program that is currently being run. The discretionary control data is fed into the microprocessor or V-chip integrated circuit. The parent pre-sets a discretionary threshold for the television receiver. If the discretionary control data carried by line 21 is less than the discretionary threshold set for the television receiver, then the amount and degree of sex and violence in the currently running program is considered to be acceptable, and the viewer is allowed to watch the program. If the discretionary control data is greater than the discretionary ~~threshold~~ threshold, then

-2-

the amount and degree of sex and violence in the presently running program is considered to be unacceptable, and the video signal carried by that channel is blanked out, or otherwise made unviewable.

2.   Please amend the paragraph beginning on page 2, line 17 as follows.

~~Applicances~~ Appliances for watching video programs have been constructed in recent years with multiple tuners. Video appliances constructed with two or more tuners, such as television receivers coupled with video cassette recorders (*i.e.*, a TVCR), have been proposed for example, by Sung-doug Kim in an *Apparatus For Performing Programmed Recording Using Broadcast Program Data and Method Therefor In a Two-tuner System*, U.S. Patent No. 6,058,242 issued on the 2nd of May 2000. These multi-tuner video appliances are also sometimes referred to as "TV/VCR combos" by retail vendors such as Circuit City.

3.   Please amend the paragraph beginning on page 4, line 12 as follows:

It is still yet a further object to provide a simplified process and circuit able to restrict viewing of video image programs with a video appliance that is equipped either with a single tuner or with ~~multiple~~ tuners independently operable tuners.

4.   Please amend the paragraph beginning on page 5, line 4 as follows:

Another embodiment of the present invention provides a process for restricting the viewing of video programs of video appliances such as televison receivers, video cassette receivers and read

and writing digital video disk players, that are equipped either with a single tuner or with multiple

tuners, a viewing ~~restriction~~ restricting stage (or viewing restricting portion) and a control stage. The

discretionary control data for the program that is being received through the first tuner is detected,

and a comparison is made between the value of the discretionary threshold installed by the user in

the appliance and the discretionary control data detected for the video signal being received. A

check is made to determine whether a viewer has made a recording command through any of the

other tuners of the appliance when the detected discretionary control data that has been received for

the program is [[less]] greater than the installed viewing restriction data. The automatic gain control

signals are blocked by the view ~~restriction~~ restricting stage for the first tuner receiving the program

when the value indicated by the discretionary control data is greater than the discretionary threshold,

and the automatic fine tuning signals for the ~~second tuner~~ other tuners are blocked by the control

stage when a comparison between the discretionary control data and the discretionary threshold

indicates that viewing of the corresponding program being received by the receiving tuner is

restricted.

5.   Please amend the paragraph beginning on page 5, line 20 as follows:

Either a single tuner or a multi-tuner television receiving apparatus may be used as a

preferred embodiment of the present invention, so that when the discretionary control data in the

currently running program is greater than the discretionary threshold, not only one tuner of the video

appliance, but also all of the other tuners of the appliance are blocked, whereupon no one is able to

use that appliance to view the program that the parents have deemed to be inappropriate for young

viewers. Additionally, since the principles of the present invention may be implemented with a

transistor used to block the automatic fine tuning signals in order to lock the ~~second tuner~~ <u>other</u>

<u>tuners</u>, both the circuit and the operational program for implementing the principles of this invention

may be simplified.

6.   Please amend the paragraph beginning on page 7, line 6 as follows:

Embodiments of the present invention will hereinafter be described in detail through a

preferred embodiment of the present invention, with reference to the accompanying drawings. FIG.

1 shows a circuit of a television receiver 80 that is equipped with a single tuner 12, constructed

according to one design for a preferred embodiment of the present invention. An antenna 8, or some

other source of video image signals such as a cable modem, respectively ~~applying~~ <u>applies</u> either

broadcast or cable image video signals via signal lead 11 to tuner 12 that feeds selector 16, a video

processor 20, a display controller 24, and a video display 25. ~~View~~ <u>Viewing</u> restricting stage 26,

selector 28, memory 30 and command input stage 32 are disposed to receive commands and

operational instructions from a user as a result of the user's manual ~~manipulations~~ <u>manipulations</u>

of a multikey keypad [[for]] <u>on</u> a hand-held remote controller 36, and <u>from</u> a control stage such as

a microprocessor based controller 34. The control electrode of a first transistor Q1 is coupled to be

driven by signals output from pin S_3 of controller 34.

7.   Please amend the paragraph beginning on page 7, line 18 as follows:

Video image signals that are being received through tuner[[12,]] <u>12</u> are selectively provided

to video processing stage 20 through selector 16. Optionally, selector 16 may provide a single image

signal received via either tuner 12 or via some other source to video processor 20.

8.   Please **delete** the paragraph beginning on page 8, line 1 as follows:

~~VCR circuit 18 divides the received multiple image signals into brightness signals and color~~

~~signals, processes the brightness and color signals, and then frequency modulates the brightness and~~

~~color signals. These frequency modulated brightness and color signals are transferred to a recording~~

~~deck 22, where the image signals are recorded onto a recording medium such as a video cassette~~

~~tape. Alternatively, or in addition, a different switch (not shown) may selectively apply either video~~

~~image signals reproduced from a video tape to video processor 20, or provide the video image~~

~~signals received by tuner 12 may be applied to a DVD recorder for storage on a DVD disk.~~

9.   Please amend the paragraph beginning at page 8, line 16 as follows.

~~View restriction~~ <u>Viewing restricting</u> stage 26 detects the presence of discretionary control

data, *i.e.*, V-chip data, contained among the data carried by line 21 of the multiple image signals

received by video processor 20, and feeds the decoded discretionary control data to controller 34

after decoding the detected discretionary control data. ~~View restriction~~ <u>Viewing restricting</u> stage 26

may be constructed as a decoder that provides an output signal to controller 34 that is representative

of the discretionary control data carried by line 21. ~~View restriction~~ <u>Viewing restricting</u> stage 26

decides whether the discretionary control data has a value that is [[less]] <u>greater</u> than the

discretionary threshold. When a program ~~carried~~ on line ~~twenty-one~~ 21 of the multiple images signal

has discretionary control data that indicates a value that is greater than the discretionary threshold

that has been most recently set by the supervisory user, ~~view restriction~~ Viewing restricting stage 26

blocks the AGC voltage for tuner 12 that is receiving that particular program, through selector 28,

thereby blocking out the television program corresponding to the discretionary control data that the

parent of the young viewer deems to be inappropriate.

10.   Please amend the paragraph beginning on page 9, line 10 as follows:

Controller 34 includes a microcomputer and its peripheral circuit. Controller 34 regulates

the operation and performance of all of the components of the TV circuit 80 in response to

commands input by the user through command input stage 32. Controller 34 regulates the operation

of selector16 via control signals output on [[its]] terminal S_0. Controller 34 also controls the

electrical conductivity through the collector-emitter semiconducting path of transistor Q1 by

~~contolling~~ controlling the voltage applied by terminal S_3 to the base electrode of transistor Q1 in

response to the control provided by ~~view restriction~~ Viewing restricting stage 26 in order to mute the

AFT signals for tuner 12 when the indicated value of the discretionary control data that accompanies

a video program is greater than the discretionary threshold previously stored in memory 30 by the

supervisory user of the appliance.

11.   Please amend the paragraph beginning on page 9, line 20 as follows:

FIG. 2 is a flow chart illustrating one of the several possible operations of a video appliance

equipped with one or more discrete tuner stages (*e.g.*, such as video appliance 80 shown in FIG. 1) in accordance with the principles of the present invention. When viewing the video images on display device 25 of a video signal that is received on a channel tuned through tuner 12, the operation to restrict viewing of video images carried by [[one,]] one or more channels is as follows.

12.   Please amend the paragraph beginning on page 10, line 5 as follows:

During step 100, when the broadcast signal is received through the first tuner 12, controller 34 generates control signals on its terminal S_0 to switch selector 16 so that a multiple image signal provided by tuner 12 may be applied to video processor 20. Controller 34 also generates a control signal at terminal S_2 to switch selector 28 to apply the automatic gain contol control signals AGC for tuner 12. Subsequently, during step 102, the multiple image signal received through tuner 12 is applied to view restriction Viewing restricting stage 26 to be decoded to allow detection of the discretionary control data carried by line 21 data. Then, in step 104, controller 34 makes a determination of whether the program currently being received is accompanied by discretionary control data that indicates a whose value that is [[less]] greater than the discretionary threshold currently stored in memory 30? 30. When the value indicated by the discretionary control data carried by line 21 is less than the discretionary threshold, the AGC signal for tuner 12 is maintained during step 106 "as is" in order to continue application of the AGC signal to the tuner 12 so that the viewer will be allowed to watch the program that corresponds to the discretionary control data.

13.   Please amend the paragraph beginning on page 10, line 19 as follows:

When the value of the discretionary control data carried by line 21 is greater than the discretionary threshold most recently stored in memory 30, the receiving operation of tuner 12 is locked in step 112 by generation of a control signal S_2 to cause ~~actuator~~ <u>selector</u> 28 to block transmission of the AGC signal [[to]] <u>from</u> tuner 12. As a result, it becomes impossible for the viewer to watch any program of video images through tuner 12 that has a value indicated by its accompanying discretionary control data which is greater than the discretionary threshold.

14. Please **delete** the paragraph beginning on page 11, line 4 as follows:

~~When a recording command is received by controller 34 from command input stage 32 for the same channel as is currently being received through the second tuner, the control voltage applied to the base of transistor Q1 by terminal S_3, turns transistor Q1 on so that AFT signals for second tuner 12 are shunted to either ground or to a local reference potential by the collector-emitter path of transistor Q1 and the reception of that channel via second tuner 12 is blocked, thus locking the receiving operation of the multiple tuner appliance and thereby restricting reception to only those channels that are received through first tuner 10. At the same time, during step 112 the AGC signals of tuner 12 are also blocked by third selector 28, thereby preventing second tuner 12 from being used to receive any channel when the value of the discretionary control data carried by line 21 of a video image signal on that channel is greater than the discretionary threshold most recently stored in memory 21. Therefore, it is impossible to either record or to view any program received via tuner 21 that has discretionary control data that is greater in value than the discretionary threshold.~~

15. Please amend the paragraph beginning at page 11, line 17 as follows.

FIG. 3 shows a circuit of a video cassette recorder 90 as an exemplar of another single tuner video appliance constructed according to one design for a preferred embodiment of the present invention, with tuner 10. Antenna 7, or some other source of video image signals such as a cable modem, respectively applying either broadcast or cable video image signals via signal lead 9 to tuner ~~10 that~~ 10. Tuner 10 selectively feeds selector 14, respectively applying either broadcast or cable image video signals via selector 14 to a video cassette recorder circuit (*i.e.*, a VCR circuit) 18. ~~View~~ Viewing restricting stage 26, selector 28, memory 30, and command input stage 32 are disposed to receive commands and operational instructions from a user as a result of the user's manual ~~maniplulations~~ manipulations of a multikey keypad ~~for a~~ on hand-held remote controller ~~36,~~ ~~and a control stage such as a~~ 36. These user commands are sent through command input stage 32 to microprocessor based controller 34. [[The]] A control electrode transistor Q2 is coupled to be driven by signals output from pin S_4 of controller 34.

16. Please amend the paragraph beginning at page 12, line 7 as follows.

Video image signals that are being received through tuner [[10,,]] 10, are selectively provided to VCR circuit 18 through selector 14. Optionally, selector 14 may provide a single image signal received via either tuner 10 or some other source to both VCR circuit 18 and some other video appliance.

17. Please amend the paragraph beginning on page 13, line 12 as follows:

The discretionary control data, the discretionary threshold that has been pre-set by a user, a user ID code, and other operational information [[is]] are written into and read from memory 30 by controller 34.

18. Please amend the paragraph beginning on page 13, line 15 as follows:

Controller 34 includes a microcomputer and its peripheral circuit. Controller 34 regulates the operation and performance of all of the components of appliance 90 in response to commands input by the user through command input stage 32. Controller 34 regulates the operation of selector 14 via control signals output on its terminals terminal S_1. Controller 34 also controls the electrical conductivity through the collector-emitter semiconducting path of transistor Q2 by contolling controlling the voltage applied by terminal S_4 to the base electrodes of transistor Q2 in response to the control provided by view restriction Viewing restricting stage 26 in order to mute the AFT signals for tuner 10 when the indicated value of the discretionary control data that accompanies a video program is greater than the discretionary threshold previously stored in memory 30 by the supervisory user of the appliance.

19. Please amend the paragraph beginning on page 14, line 4 as follows:

FIG. 4 shows a circuit of a two-tuner TVCR 200 constructed according to one design for a preferred embodiment of the present invention, with two independently operable tuners 10, 12. The two-tuner TVCR includes either a first antenna 7, or some other source of video image signals such as a cable modem, respectively applying either broadcast or cable video image signals via a first

signal lead 9 to first tuner 10 that selectively feeds first selector 14 and second selector 16, either a

second antenna 8, or some other source of video image signals such as a cable modem, respectively

applying either broadcast or cable image video signals via a second signal lead 11 to second tuner

12 that feeds first selector 14 and second selector 16, a video cassette recorder circuit (*i.e.*, a VCR

circuit) 18, a video processor 20, a display controller 24, a video display 25, a ~~view~~ <u>viewing</u>

restricting stage 26, a third selector 28, a memory 30, a command input stage 32 disposed to receive

commands and operational instructions from a user as a result of the user's manual ~~maniptulations~~

<u>manipulations</u> of a multikey keypad for a hand-held remote controller 36, and a control stage such

as a microprocessor based controller 34. The control electrode of a first transistor Q1 is coupled to

be driven by signals output from pin S_3 of controller 34, and the control electrode of a second

transistor Q2 is coupled to be driven by signals output from pin S_4 of controller 34.

20.   Please amend the paragraph beginning on page 15, line 20 as follows:

~~View restriction~~ <u>Viewing restricting</u> stage 26 detects the presence of discretionary control

data, *i.e.*, V-chip data, contained among the data carried by line 21 of the multiple image signals

received by video processor 20, and feeds the decoded discretionary control data to controller 34

after decoding the detected discretionary control data. ~~View restriction~~ <u>Viewing restricting</u> stage 26

may be constructed as a decoder that provides an output signal to controller 34 that is representative

of the discretionary control data carried by line 21. ~~View restriction~~ <u>Viewing restricting</u> stage 26

decides whether the discretionary control data has a value that is [[less]] <u>greater</u> than the

discretionary threshold. When a program has discretionary control data that indicates a value that is

greater than the discretionary threshold that has been most recently set by the supervisory user, ~~view~~

~~restriction~~ Viewing restricting stage 26 blocks the AGC voltage for the corresponding ~~tuner~~ tuners 10,

12 that [[is]] are receiving that particular program through third selector 28, thereby blocking out

the television program corresponding to the discretionary control data that the parent of the young

viewer deems to be inappropriate.

21.   Please amend the paragraph beginning on page 16, line 15 as follows:

Controller 34 includes a microcomputer and its peripheral circuit. Controller 34 regulates

the operation and performance of all of the components of the TVCR circuit in response to

commands input by the user through command input stage 32. Controller 34 regulates the operation

of selectors 14, 16 via control signals output on its terminals S_1, S_0, respectively. Controller 34 also

controls the electrical conductivity through the collector-emitter semiconducting path of first and

second transistors Q1, Q2 by ~~contolling~~ controlling the voltages applied by terminals S_3, S_4 to the

respective base electrodes of transistors Q1, Q2 in response to the control provided by view

restriction stage 26 in order to mute the AFT signals for either of the two tuners 10, 12 when the

indicated value of the discretionary control data that accompanies a video program is greater than

the discretionary threshold previously stored in memory 30 by the supervisory user of the appliance.

22.   Please amend the paragraph beginning on page 17, line 5 as follows:

FIG. 5 is a flow chart illustrating one of the several possible operations of the two-tuner

TCVR equipped with two, or more discrete tuner stages (e.g., such as the embodiment shown in FIG.

[[1]] 4) in accordance with the principles of the present invention. When viewing the video images

on display device 25 of a video signal that is received on a channel tuned through second tuner 12

and simultaneously recording a channel selected through first tuner 10 by using the VCR, the

operation to restrict viewing of video images carried by one, or more channels is as follows.

23.   Please amend the paragraph beginning on page 17, line 12 as follows:

During step 100, when the broadcast signal is received through second tuner 12, controller

34 generates control signals on its terminals S_0 and S_1 respectively to switch second selector 16 so

that a multiple image signal provided by second tuner 12 may be applied to video processor 20, and

to switch first selector 14 so that a multiple image signal provided by first tuner 10 may be applied

to VCR circuit 18.   Controller 34 also generates a control signal at terminal S_2 to switch third

selector 28 to apply the automatic gain ~~contol~~ control signals AGC for second tuner 12.

Subsequently, during step 102, the multiple image signal received through second tuner 12 is applied

to view restriction stage 26 to be decoded to allow detection of the discretionary control data carried

by line 21 data.   Then, in step 104 controller 34 makes a determination of whether the program

currently being received is accompanied by discretionary control data that indicates a value that is

less than the discretionary threshold currently stored in memory ~~30?~~ 30. When the value indicated

by the discretionary control data carried by line 21 is less than the discretionary threshold, the AGC

signal of the second tuner 12 is maintained during step 106 "as is" in order to continue application

of the AGC signal to the second tuner so that the viewer will be allowed to watch the program that

corresponds to the discretionary control data.

24.   Please amend the paragraph beginning on page 18, line 16 as follows:

When a recording command is received by controller 34 from command input stage 32 for the same channel as is currently being received through the second tuner, the control voltage applied to the base of transistor Q1 by terminal S_3 turns transistor Q1 on so that AFT signals for second tuner 12 are shunted to either ground or to a local reference potential by the collector-emitter path of transistor Q1 and the reception of that channel via second tuner 12 is blocked <u>in step 110</u>, thus locking the receiving operation of the multiple tuner appliance and thereby restricting reception to only those channels that are received through first tuner 10. At the same time, during step 112 the AGC signals of the second tuner 12 are also blocked by third selector 28, thereby preventing second tuner 12 from being used to receive any channel when the value of the discretionary control data carried by line 21 of a video image signal on that channel is greater than the discretionary threshold most recently stored in memory 30. Therefore, it is impossible to record and view any program having discretionary control data that is greater in value than the discretionary threshold through <u>either</u> the first [[and]] <u>or the</u> second tuners 10 and 12.